AUGUST 1979
No. 8

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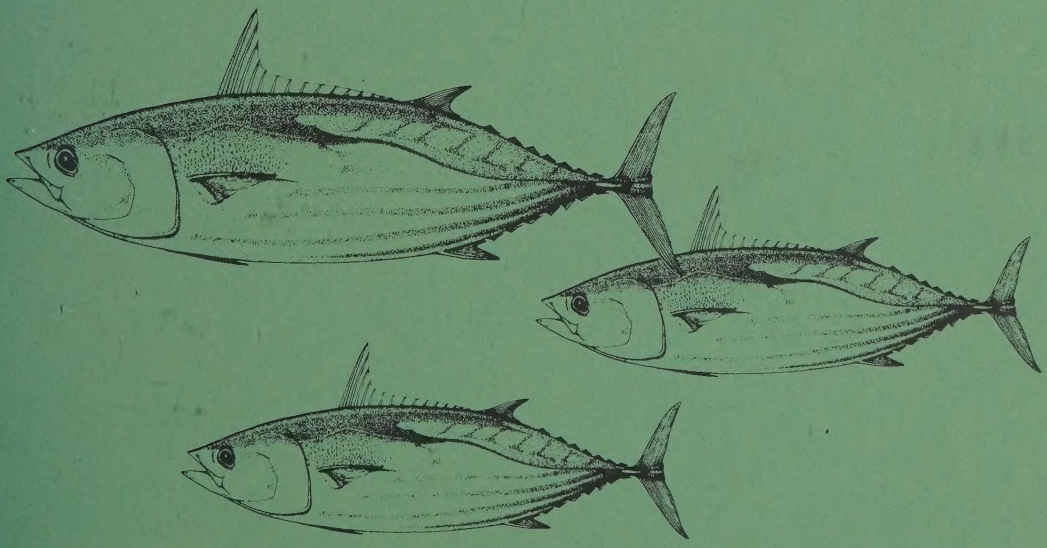

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FISHING INFORMATION

AUGUST 1979, No. 8

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I. Barrett, Director, SOUTHWEST FISHERIES CENTER
J. Carr, Deputy Director

PREFACE

This publication, Fishing Information, appears monthly and contains 1) fishery advisory information, 2) a narrative description of pertinent surface temperature conditions, 3) charts of winds and pressures for the eastern North Pacific, 4) charts of sea surface temperature for the North Pacific and eastern tropical Pacific, and 5) charts of subsurface temperature structure in the eastern North Pacific.

A supplement to Fishing Information appears at 15-day intervals throughout the year. It contains a chart of sea surface temperature (contoured at 2°F (1°C) intervals) from Baja California to Vancouver Island out to about 135°W. Special bulletins are published in conjunction with the 15-day sea surface temperature charts which include short-term projections of albacore distribution and locations of productive fishing areas, information on oceanographic and atmospheric conditions, and other information as is appropriate during the albacore fishing season.

To cancel delivery of this publication in the event you no longer need to receive it, or to change the delivery address if you are moving but still need to receive it, please notify us by writing: James A. Renner, Editor, Fishing Information, National Marine Fisheries Service, Southwest Fisheries Center, P.O. Box 271, La Jolla, California 92038.

Submitted for publication - October 3, 1979

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ENVIRONMENTAL CHARTS ANALYZED BY:

F. Miller (Figures 8 and 9)
J. Renner (Figures 1, 2, 3, 4, 5, 6, 7, and 15 day supplement)

TECHNICAL EDITOR:
R. Allen
CARTOGRAPHY:
R. Allen, E. Portillo

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National Weather Service, San Diego, California and Washington D. C.
National Ocean Survey, Pacific Marine Center, Seattle, Washington

Fisheries Research Board of Canada, Pacific Environment Institute, West Vancouver, British Columbia by L. F. Giovando from observations by:
J. Redhead at Langara Island Light; D. Geiger at Cape St. James Light;
L. Collins at Kains Island Light; M. V. Stewart at
Amphitrite Point Light

Scripps Institution of Oceanography, La Jolla, California

Expendable bathythermograph and salinity observations are made by the mates and engineers of the *Mauiwili* of the Matson Navigation Co. The data are processed under supervision of D. R. McLain at the NMFS Pacific Environmental Group, Monterey, California, using computer facilities of the Fleet Numerical Weather Central, Monterey. The project is partially supported by the National Science Foundation and the Office of Naval Research.

Sea Surface Temperature and Environmental Conditions

Forrest R. Miller

Eastern North Pacific

During August the subtropical high pressure center is normally located near 37°N, 150°W and the Aleutian low is normally centered near 65°N between 170°W and 180° (Figure 1). The high pressure system usually generates northerly surface winds from 12 to 15 knots over the tuna fishing grounds along the U.S. west coast. Along the coasts of Oregon, California, and Baja California, coastal upwelling is usually most active where surface winds blow from the north, parallel to the coast or offshore from the northeast. Ocean fronts or "temperature edges" are most pronounced along the western and southern boundaries of coastal upwelling. Albacore tuna fishing is often good along the west sides of these strong sea surface temperature (SST) fronts. SST's west of 130°W and south of 35°N normally show seasonal increases, but along the coast from Cape Blanco (45°N) to Point Arguello (34°N), SST's will usually remain the same or decrease from July to August.

During August 1979 the subtropical high pressure center was located near 43°N, 145°W (Figure 2), and a high pressure ridge extended from the center into the Gulf of Alaska. Surface pressures were 4 millibars above normal in the Gulf of Alaska and over 5 millibars below normal at 37°N, 150°W where the high pressure center is normally located (Figure 1). The Aleutian low pressure center drifted westward from July to August to an average location over Kamchatka (57°N, 165°E). This was markedly west of its normal position. As a result, most storm tracks crossed the Gulf of Alaska into northern Canada at latitudes farther north than normal. Along the U.S. west coast, the predominant surface winds were northerly but were 2 to 4 knots below normal because of a weak high pressure system. The subtropical high pressure system was also weaker than normal in the central Pacific between 150°W and 170°W. The coastal region from Oregon to British Columbia experienced higher than normal pressure and below normal rainfall. Most of the coastal region south of 35°N was dominated by lower than normal pressure.

SST's for August (Figure 3) showed a spreading isotherm (SST contours) pattern east of 160°W and, consequently, a weaker than normal north Pacific Ocean front. Also, isotherms bulged northward significantly between 125°W and 145°W where the high pressure ridge prevailed most of the month. In this part of the eastern Pacific, SST's were more than 1°C above normal in three areas from 20°N to the Gulf of Alaska (Figure 5). A very large part of the north Pacific east of 155°W experienced SST's 1 to 3°C greater in August 1979 than in August 1978 (Figure 7). The high pressure system has been a much more prominent feature in the eastern Pacific this summer compared to last summer, especially north of 45°N. This is strongly reflected in the extensive positive SST departures from normal and unusually large year-to-year positive differences.

Along most of the U.S. west coast and Baja California, coastal upwelling and ocean wind mixing was often intermittent and seldom strong enough to lower SST's much below normal. Consequently, the ocean frontal boundaries (east-west SST gradients) offshore from 35°N to 45°N have been weaker than usual. This resulted primarily from a northward displacement of the high pressure system with coastal northerly winds 2 to 4 knots below normal. The absence of cold coastal waters since July 1979 may have been a contributing factor in the low catch rates of albacore tuna along the west coast this year. The only significant area with SST's

more than 1°C below normal was found west of 150°W between 35°N and 45°N (Figure 5). In this area the SST differences from August 1978 (Figure 7) were also negative. From July to August 1979, the center of the negative SST departures shifted from 35°N to 40°N between 150°W and 175°W as a result of the northward shift of the high pressure system and the westward movement of the Aleutian low. Consequently, most of the eastern Pacific storms and highest surface winds developed west of 150°W between the Aleutian Islands, and the subtropical high pressure center (Figure 2).

Western North Pacific

The high pressure system in the western Pacific (centered along 35°N) dominated the surface wind circulation from 20°N to 45°N. The Aleutian low (centered near 57°N, 165°E) controlled the circulation over the northwest Pacific north of 45°N. Between these two major circulations, summer storms, strong winds, and rough seas developed and moved eastward. One of the results was a strong north Pacific Ocean front between 40°N and 45°N (Figure 4). The strong frontal boundary west of 170°W was maintained in August by negative SST departures greater than 1°C between 45°N and 50°N (Figure 6) which were associated with high surface winds and ocean mixing. Also, positive SST departures developed south of the front along the coast of Japan and eastward near 40°N where the Kuroshio Current and southerly winds moved warmer water northeastward. South of 30°N, several areas with SST's greater than 29°C developed where the southern half of the Pacific high pressure system, with associated weaker southeast surface winds and relatively clear skies, created favorable surface heating conditions. The large area with positive SST departures south of 35°N (Figure 6) reflects this condition.

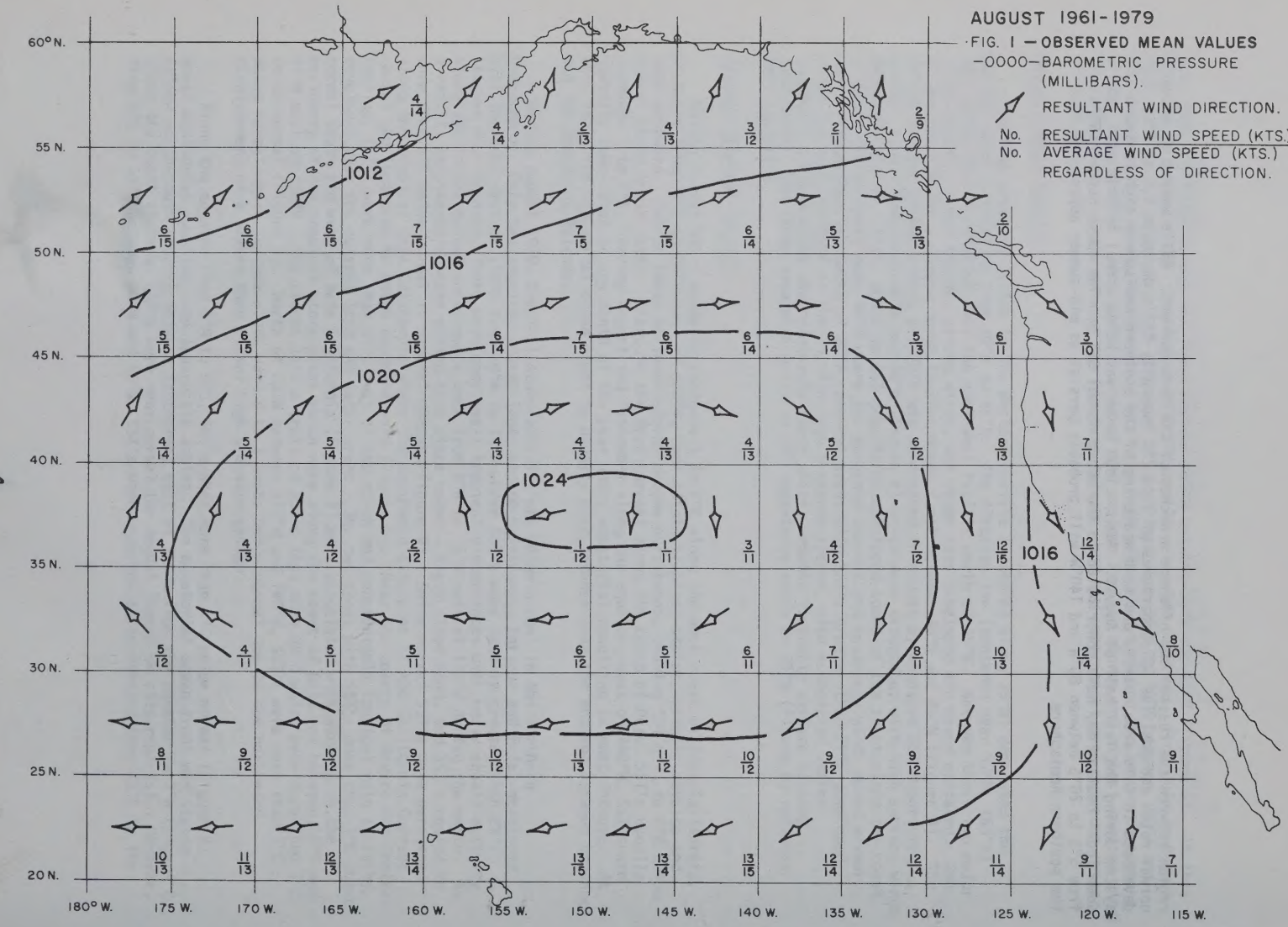
Eastern Tropical Pacific

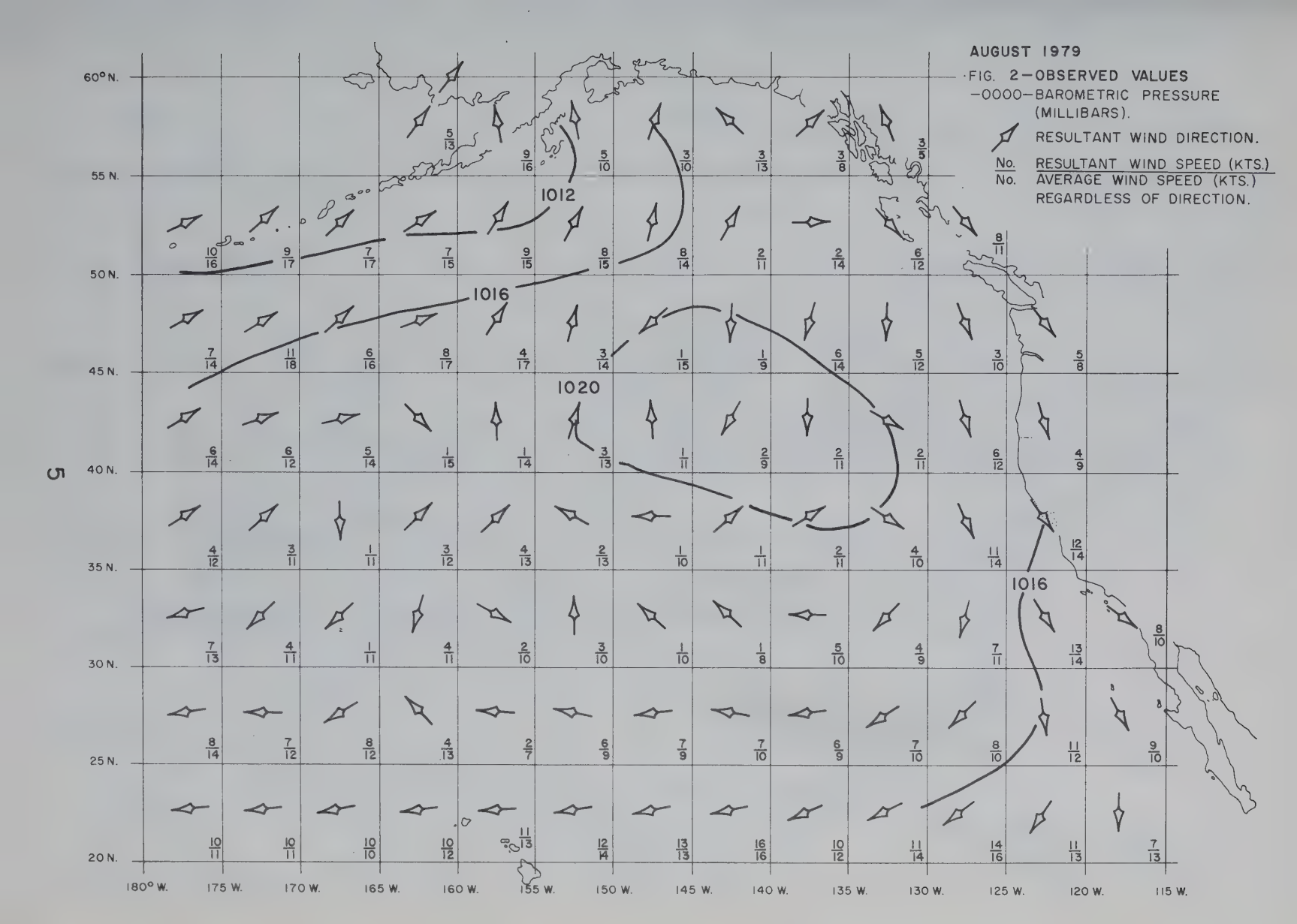
During August SST's normally increase 1 to 2°C along the west coast of Baja California. In areas from 10°N to 20°N east of 130°W, four to six tropical storms normally develop and move westward. Two or three of these storms become hurricanes, leaving SST's 1 to 2°C below normal along their paths. Also, in the Peru Current along the coast of Peru, SST's usually decrease 1 to 2°C. During August and September along the equator, east of 140°W, SST's are normally lower than in any month of the year where equatorial upwelling is most intense. At this time, the equatorial ocean front is usually most intense near the equator between Ecuador and the Galapagos Islands.

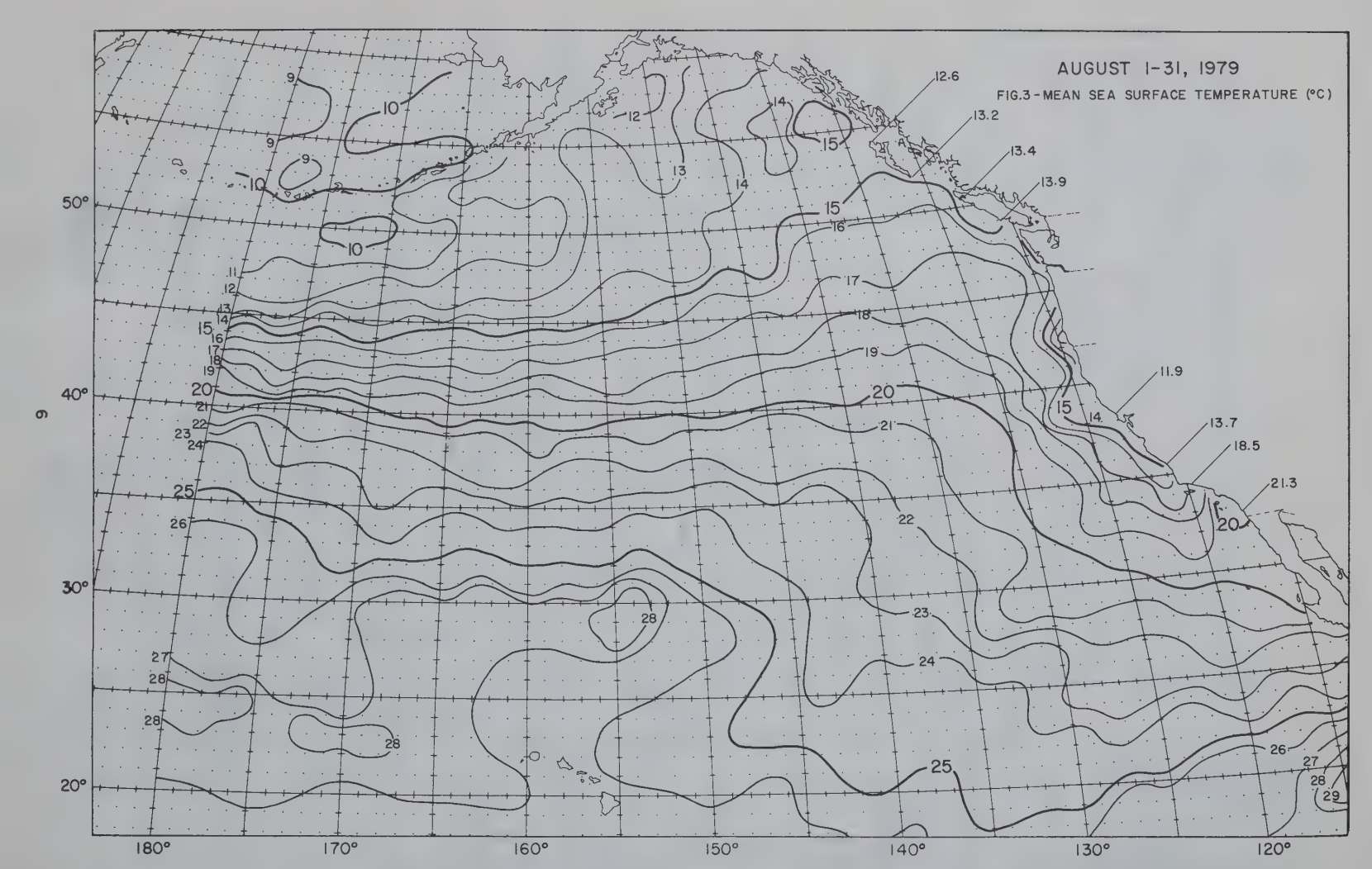
During August 1979, tropical storm activity was below normal in the northern hemisphere. Only two tropical storms (both became hurricanes, Enrique and Fefa) developed over the area east of 110°W from 10°N to 15°N where SST's were usually greater than 29°F (Figure 8). However, there were many small tropical disturbances with heavy squall activity along the intertropical convergence zone from 8°N to 15°N east of 120°W during the month. As a result, considerable ocean mixing took place under a heavy cloud band, and SST's cooled to more than 1°C below normal in several places (Figure 9). Below normal SST's have persisted along the coast of Baja California where the southward extension of the California Current caused the isotherms to bulge southeastward (Figure 8). Near the coasts of Mexico and Central America, SST's were more than 30°C most of the month and considerable tropical rain activity developed over the coastal land and water areas. The two areas with SST's more than 1°C above normal south and west of Baja California (Figure 9) were associated with warming on the periphery of the tropical storm paths which were along the coast of Baja and between 10°N and 15°N east of 136°W. The storms left a trail of SST's less than 28°C which were more than 1°C below normal (Figure 9). North of 20°N between 115°W and 140°W, SST's were more than 1°C above normal where surface winds were 2 to 3 knots below normal due to the northward displacement of a weaker than normal high pressure system.

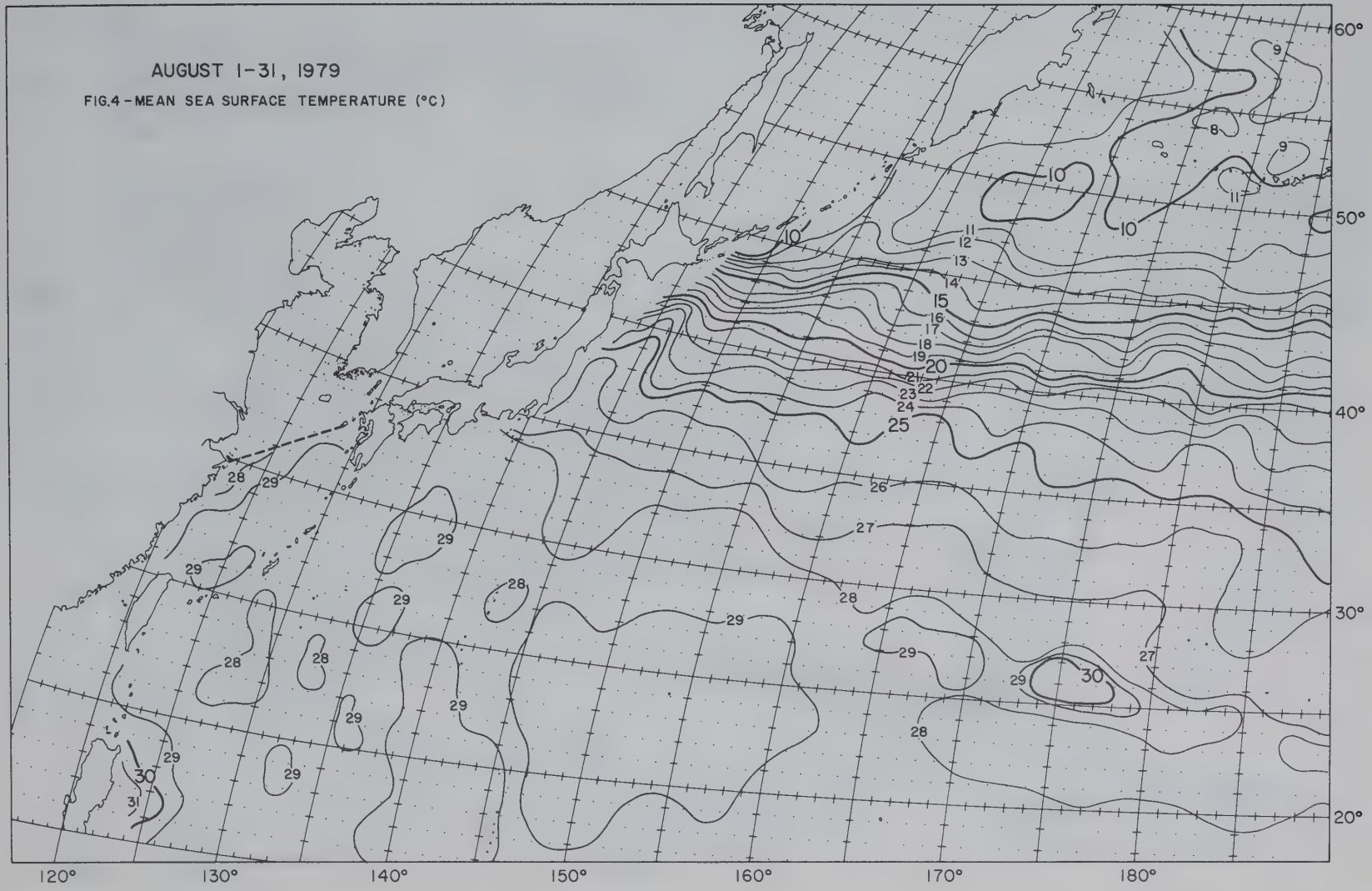
Along the equator from 5°N to 5°S, SST's were more than 1°C below normal (Figure 9) where equatorial upwelling was apparently active. The equatorial ocean front was strong (close north-south spacing between isotherms) east of 120°W from the equator to 3°N (Figure 8). Along the coast of Peru, SST's were near normal for August (based on ship reports). However, from 5°S to 13°S between 80°W and 90°W, SST's were reported to be greater than 22°C in the

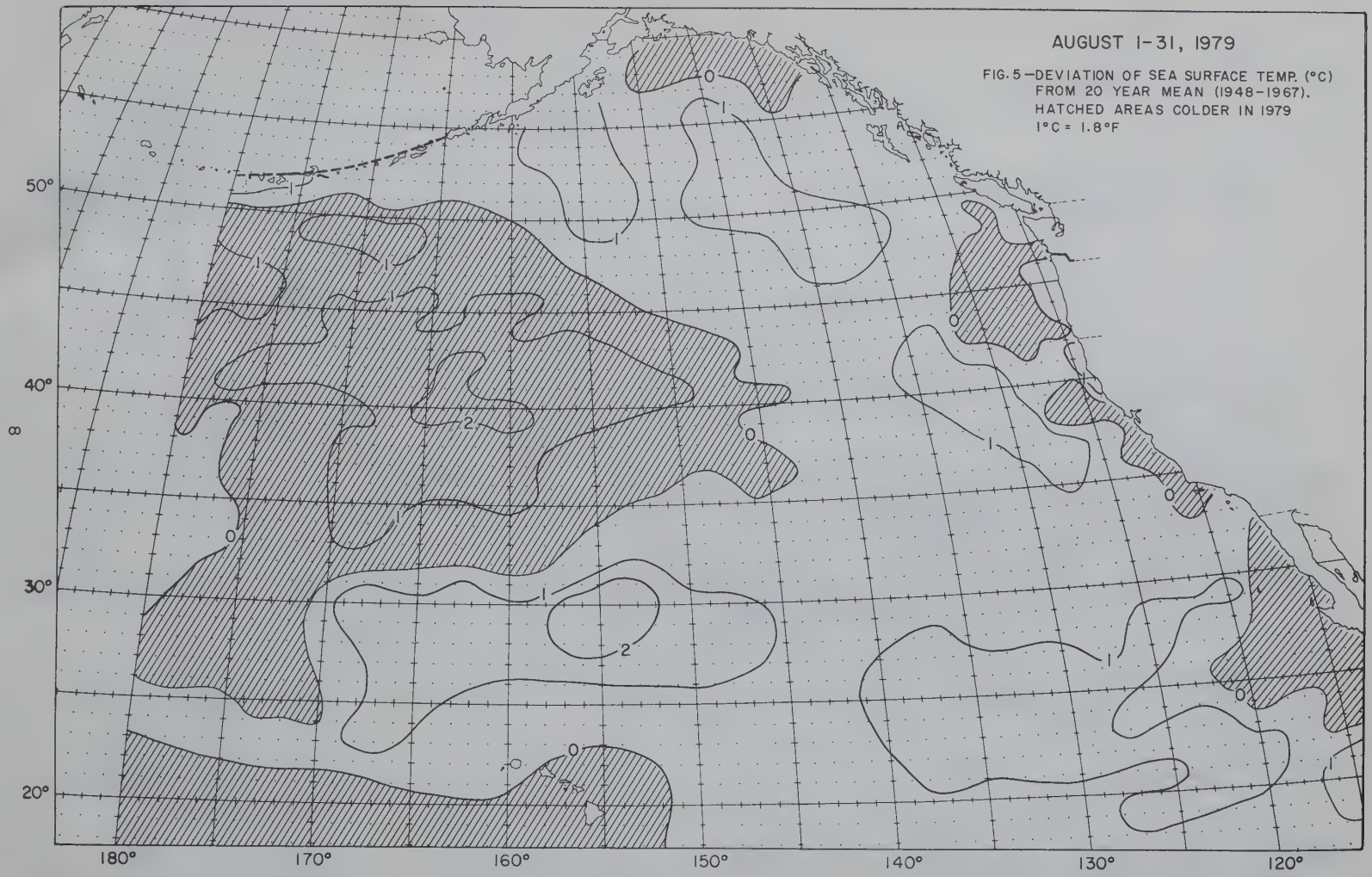
region between the coastal and offshore branches of the Peru Current. SST's warmed at above normal rates and positive SST departures of 1 to 2°C (normally SST's decrease 0.5 to 1°C) developed in this area, partly due to a weakening of the southern hemisphere high pressure system during the last half of August. Also, cloud cover was below normal in this area and some local heating may have contributed to the above normal SST's. The above normal SST's from 5°S to 20°S between 80°W and 140°W will probably persist as mid-summer approaches in the southern hemisphere.

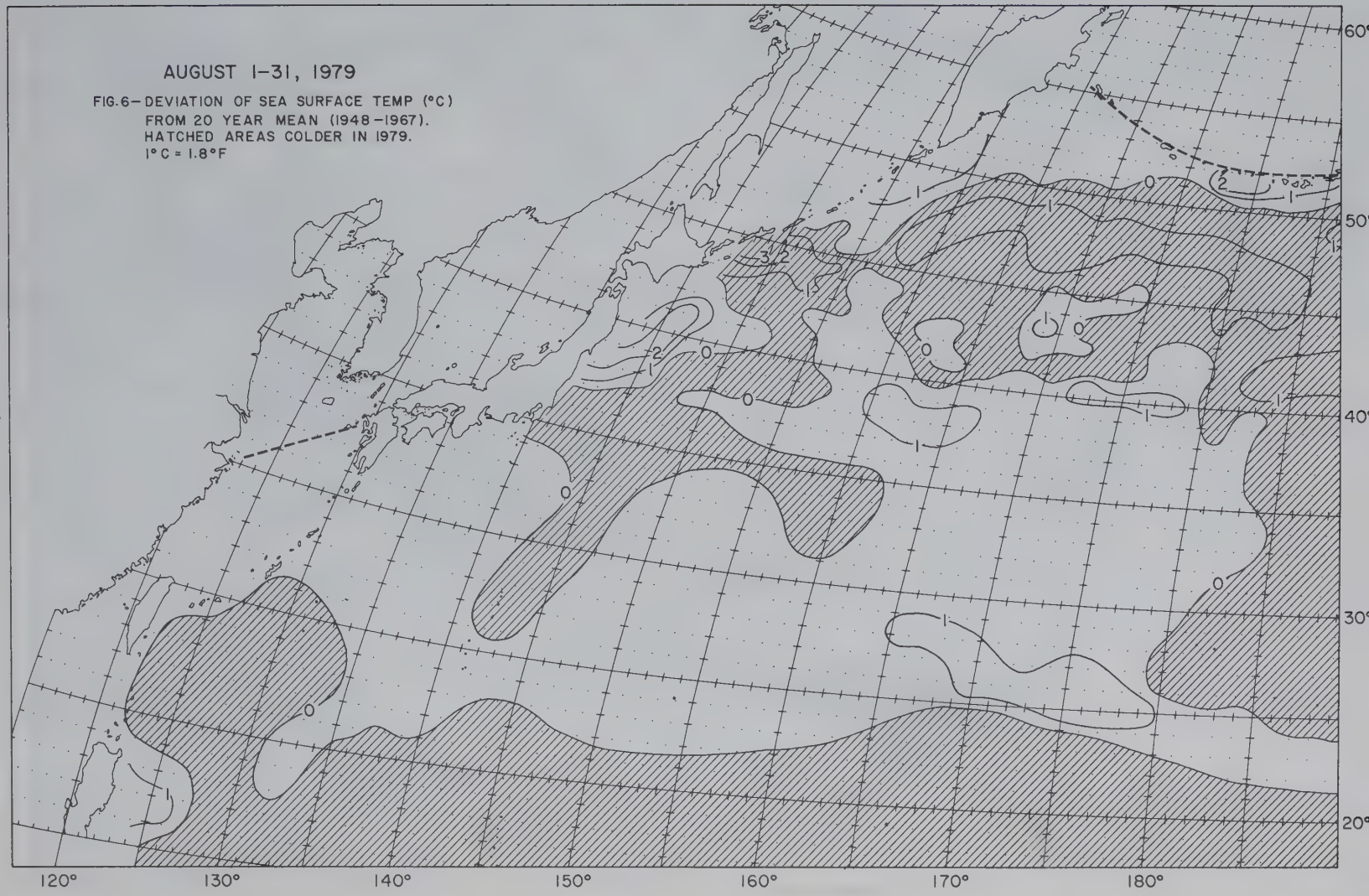

AUGUST 1961-1979
FIG. 1 — OBSERVED MEAN VALUES
—0000— BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.)
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1012
1016
1020
1024
1016
60° N.
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.

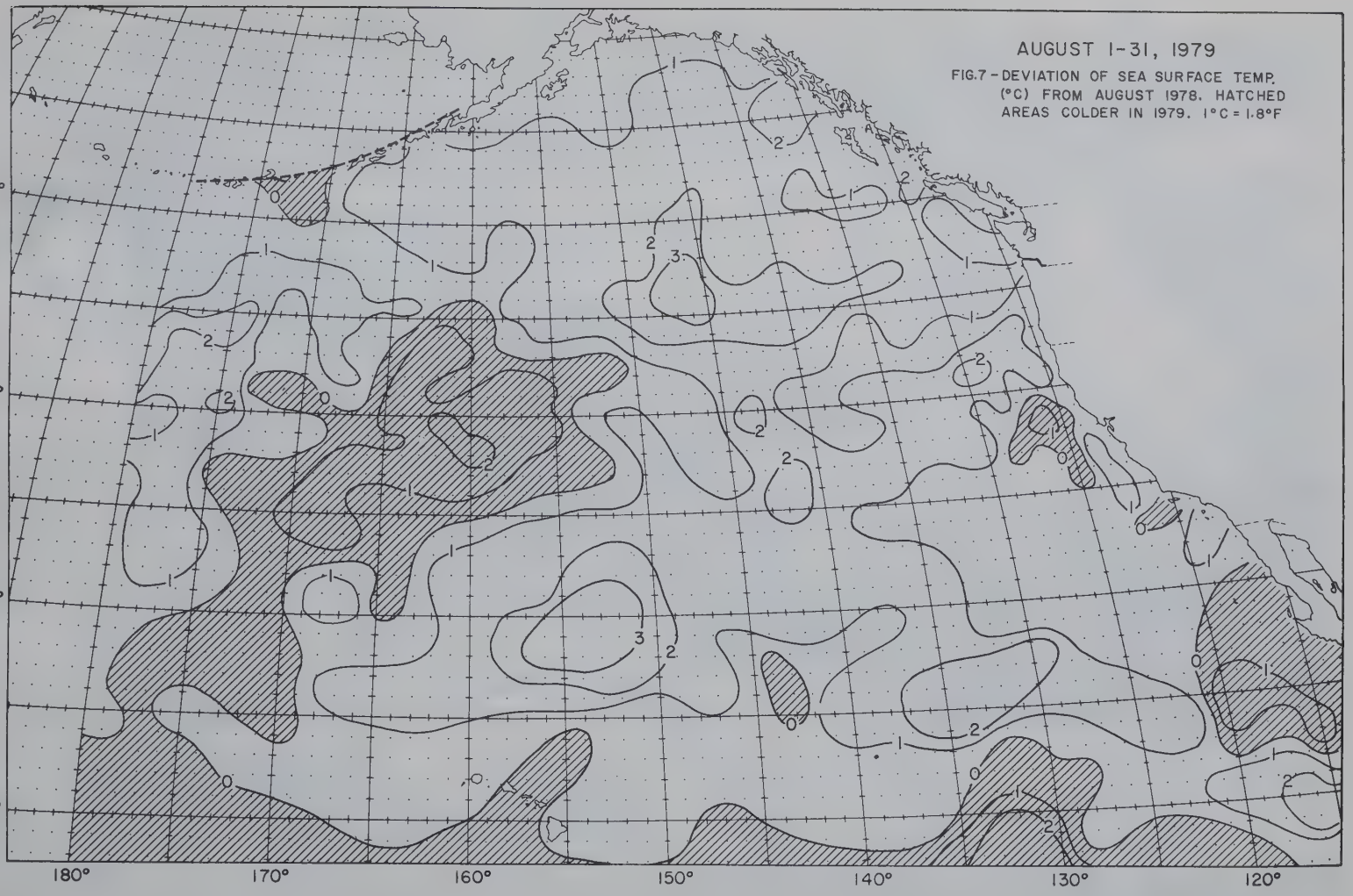

AUGUST 1979
FIG. 2—OBSERVED VALUES
—0000—BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.)
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1012
1016
1020
1016
60° N.
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.

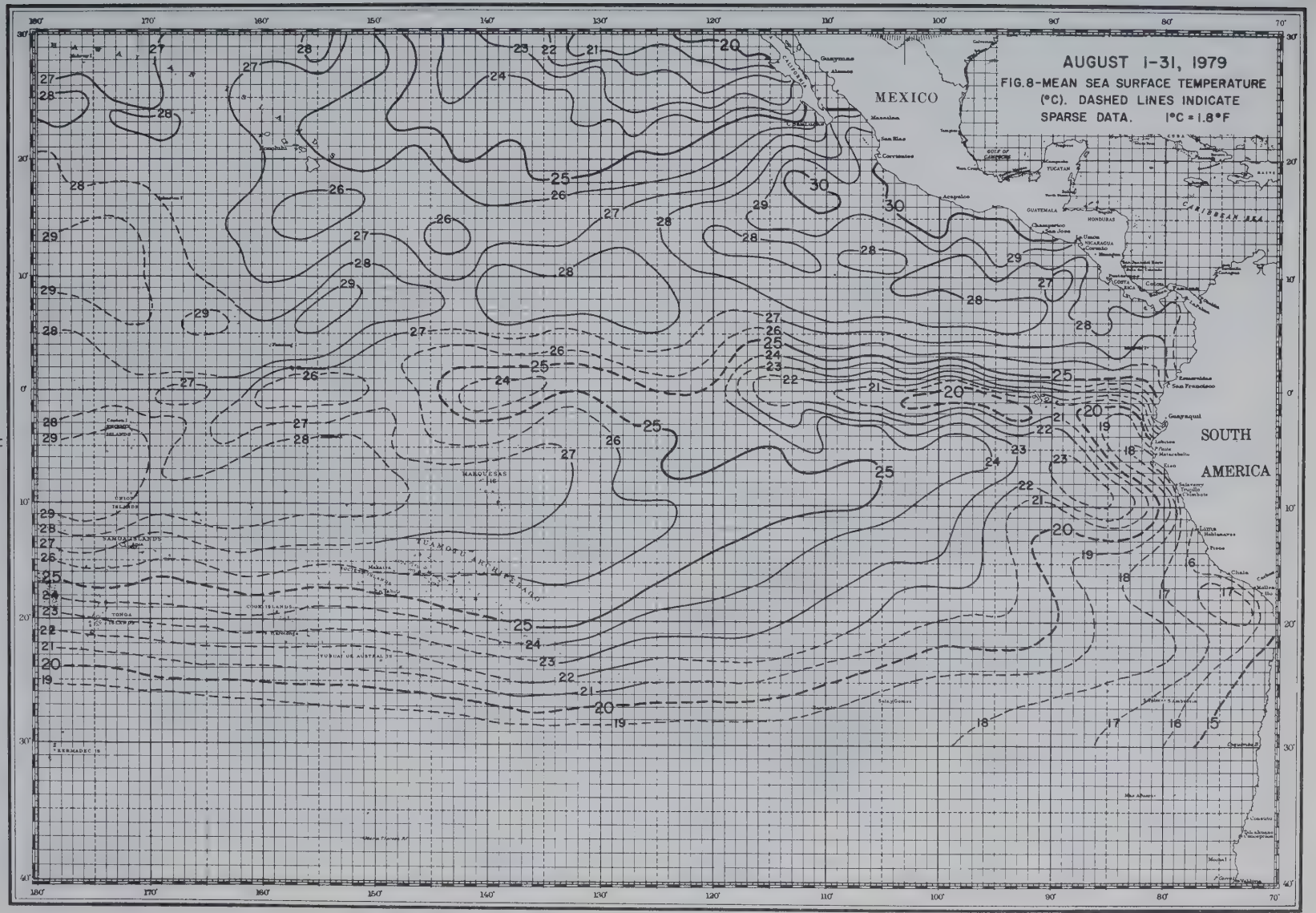

AUGUST 1-31, 1979
FIG.3 - MEAN SEA SURFACE TEMPERATURE (°C)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


AUGUST 1-31, 1979
FIG.4 - MEAN SEA SURFACE TEMPERATURE (°C)
60°
50°
40°
30°
20°
120°
130°
140°
150°
160°
170°
180°


AUGUST 1-31, 1979
FIG. 5—DEVIATION OF SEA SURFACE TEMP. (°C) FROM 20 YEAR MEAN (1948-1967). HATCHED AREAS COLDER IN 1979
1°C = 1.8°F
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
8


AUGUST 1-31, 1979
FIG.6- DEVIATION OF SEA SURFACE TEMP (°C)
FROM 20 YEAR MEAN (1948-1967).
HATCHED AREAS COLDER IN 1979.
1°C = 1.8°F
60°
50°
40°
30°
20°
120°
130°
140°
150°
160°
170°
180°


AUGUST 1-31, 1979
FIG.7 - DEVIATION OF SEA SURFACE TEMP. (°C) FROM AUGUST 1978. HATCHED AREAS COLDER IN 1979. 1°C = 1.8°F
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


AUGUST 1-31, 1979
FIG.8-MEAN SEA SURFACE TEMPERATURE (°C). DASHED LINES INDICATE SPARSE DATA. 1°C = 1.8°F
MEXICO
SOUTH AMERICA
CENTRAL AMERICA
CARIBBEAN SEA
GULF OF CALIFORNIA
YUCATAN
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
PANAMA
Acapulco
Manzanillo
San Blas
C. Corrientes
Champerico
San Jose
Corinto
Guayaquil
Esmeraldas
San Francisco
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Matarani
Ilo
Arica
MARQUESAS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
COOK ISLANDS
TONGA
SAMOA ISLANDS
FIJI ISLANDS
TUBUAI OR AUSTRAL IS
BERMADEC IS
Malpelo I.
Galapagos Is.
Clipperton I.
Cocos I.
Malden I.
Christmas I.
Caroline I.
Vostok I.
Penrhyn I.
Manihiki
Rakahanga
Pukapuka
Nassau I.
Suwarrow
Niue
Tokelau Is.
Swains I.
Fakaofo
Nukunonu
Atafu
Manua Is.
Rose I.
Tutuila
Upolu
Savaii
Wallis I.
Futuna
Alofi
Niuafoou
Tafahi
Nukuhiva
Hiva Oa
Tahuata
Fatu Hiva
Ua Huka
Ua Pou
Nuku Hiva
Eiao
Hatutu
Mohotani
Fangatau
Hao
Amanu
Tatakoto
Reao
Pukarua
Pinaki
Hereheretue
Mangareva
Gambier Is.
Pitcairn I.
Henderson I.
Ducie I.
Oeno I.
Easter I.
Sala y Gomez
Mas Afuera
Mas a Tierra
Juan Fernandez Is.
Desventuradas Is.
Robinson Crusoe I.
Alexander Selkirk I.
Mocha I.
Santa Maria I.
Isla de Chiloe
Archipelago de los Chonos
Archipelago de los Guaitecas
Archipelago de los Reinas
Archipelago de los Wellington
Archipelago de los Evangelistas
Archipelago de los Madre de Dios
Archipelago de los Diego Ramirez
Archipelago de los Tres Montes
Archipelago de los Campana
Archipelago de los Wollaston
Archipelago de los Hermite
Archipelago de los Cape Horn
Archipelago de los Staten I.
Archipelago de los Falkland Is.
Archipelago de los South Georgia
Archipelago de los South Sandwich Is.
Archipelago de los South Orkney Is.
Archipelago de los South Shetland Is.
Archipelago de los Bouvet I.
Archipelago de los Prince Edward Is.
Archipelago de los Crozet Is.
Archipelago de los Kerguelen Is.
Archipelago de los Heard I.
Archipelago de los McDonald Is.
Archipelago de los Macquarie I.
Archipelago de los Auckland Is.
Archipelago de los Campbell I.
Archipelago de los Antipodes Is.
Archipelago de los Bounty Is.
Archipelago de los Chatham Is.
Archipelago de los Kermadec Is.
Archipelago de los Norfolk I.
Archipelago de los Lord Howe I.
Archipelago de los Macquarie I.
Archipelago de los Auckland Is.
Archipelago de los Campbell I.
Archipelago de los Antipodes Is.
Archipelago de los Bounty Is.
Archipelago de los Chatham Is.
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Archipelago de los Norfolk I.
Archipelago de los Lord Howe I.

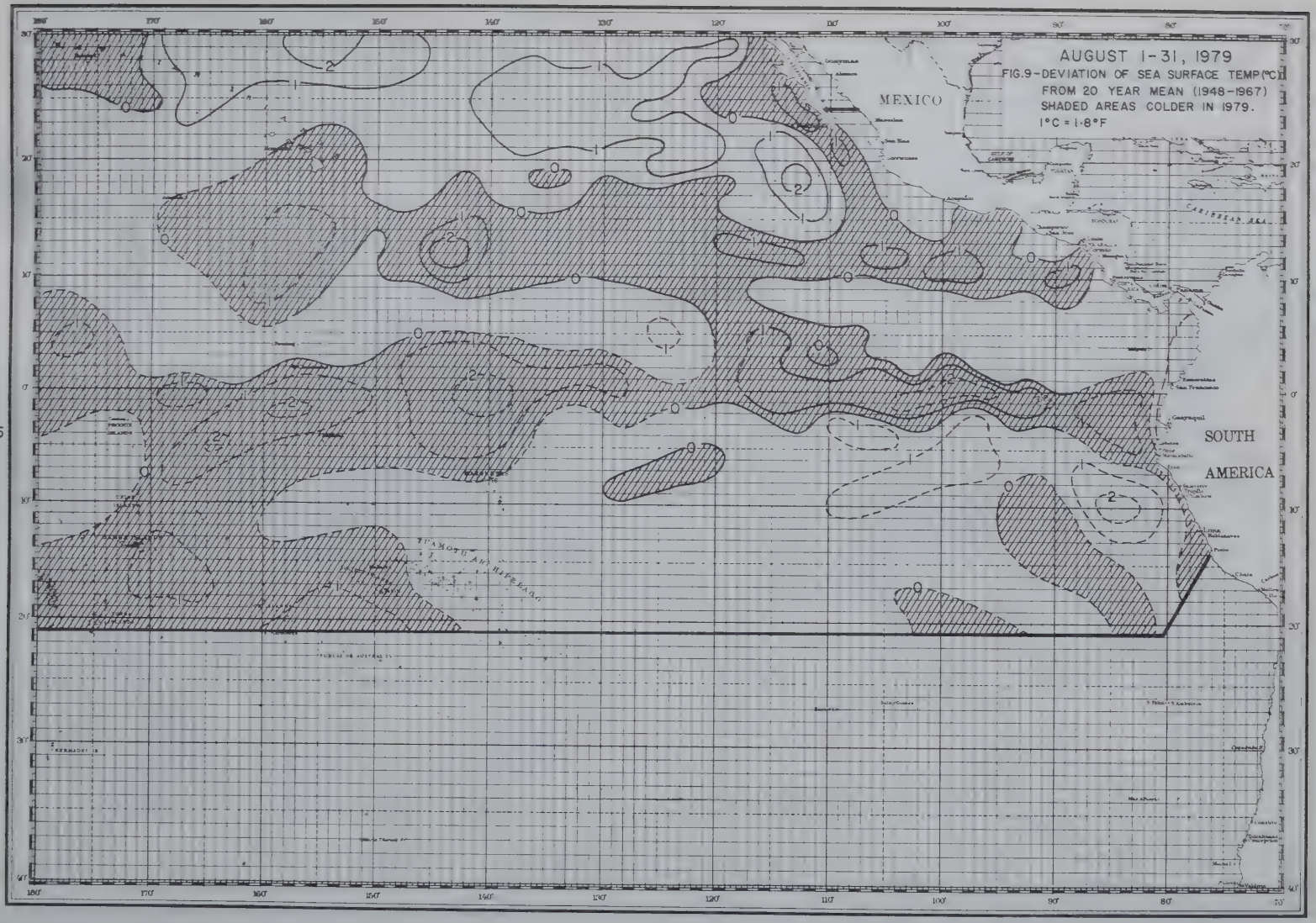
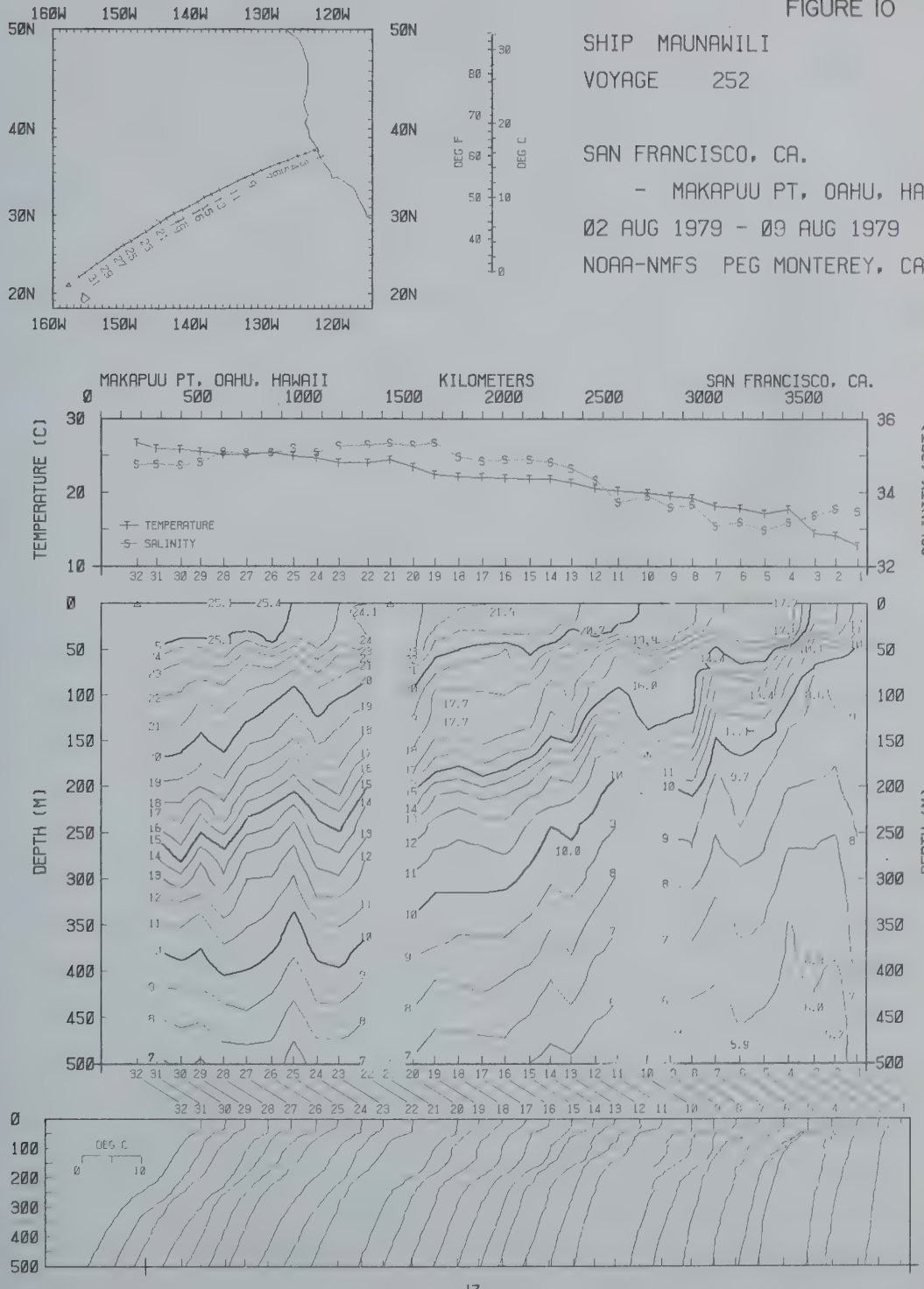

AUGUST 1-31, 1979
FIG.9-DEVIATION OF SEA SURFACE TEMP(°C)
FROM 20 YEAR MEAN (1948-1967)
SHADED AREAS COLDER IN 1979.
1°C = 1.8°F
MEXICO
SOUTH
AMERICA
CARIBBEAN SEA
GUAYAQUIL
LIMA
CHILE
HAWAIIAN ISLANDS
TROPIC OF CANCER
EQUATOR
180°
170°
160°
150°
140°
130°
120°
110°
100°
90°
80°
70°
60°
50°
40°
30°
20°
10°
0°

FIGURE 10

SHIP MAUNAWILI
VOYAGE 252

SAN FRANCISCO, CA.
- MAKAPUU PT, OAHU, HAWAII
02 AUG 1979 - 09 AUG 1979
NOAA-NMFS PEG MONTEREY, CA.



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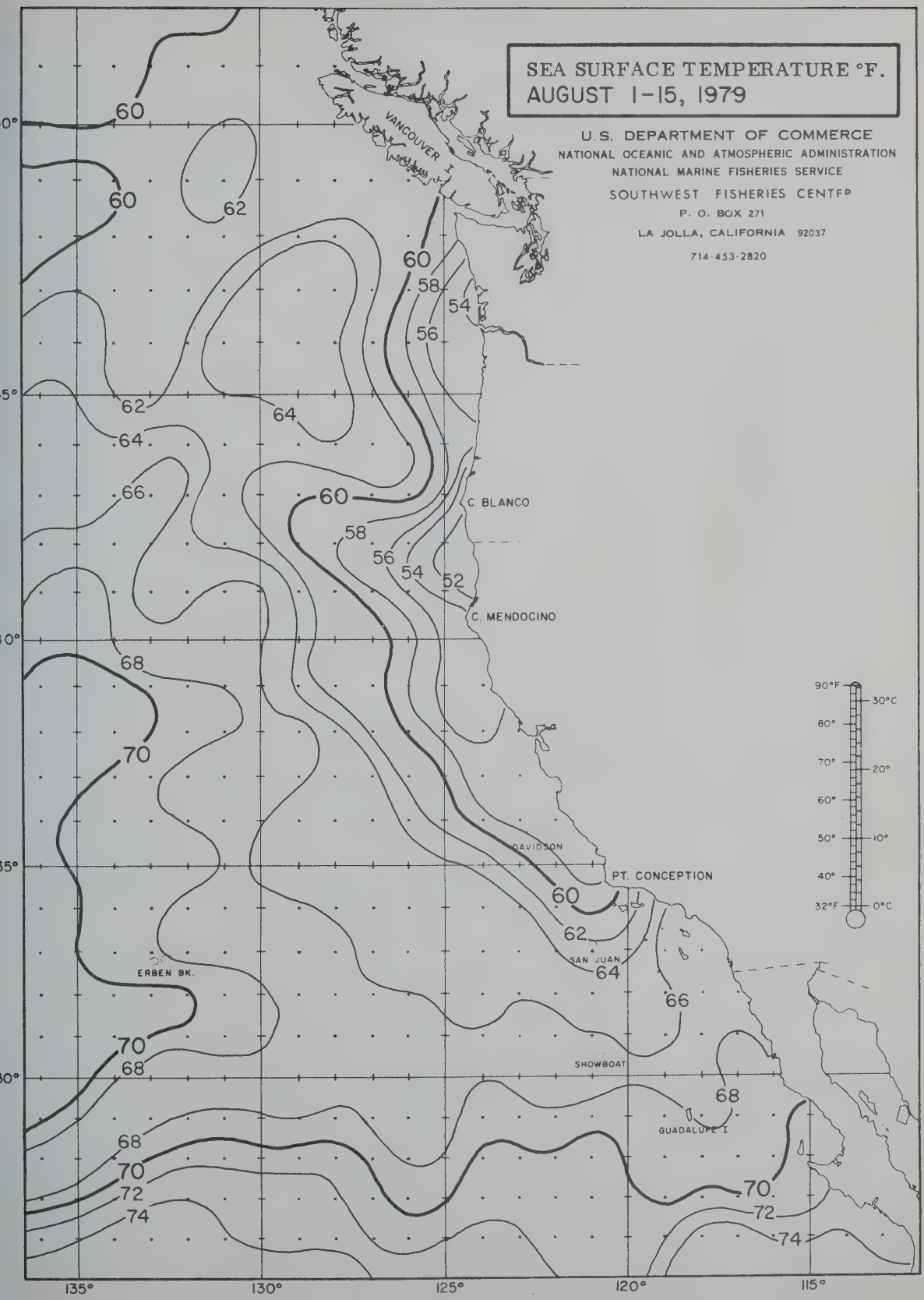
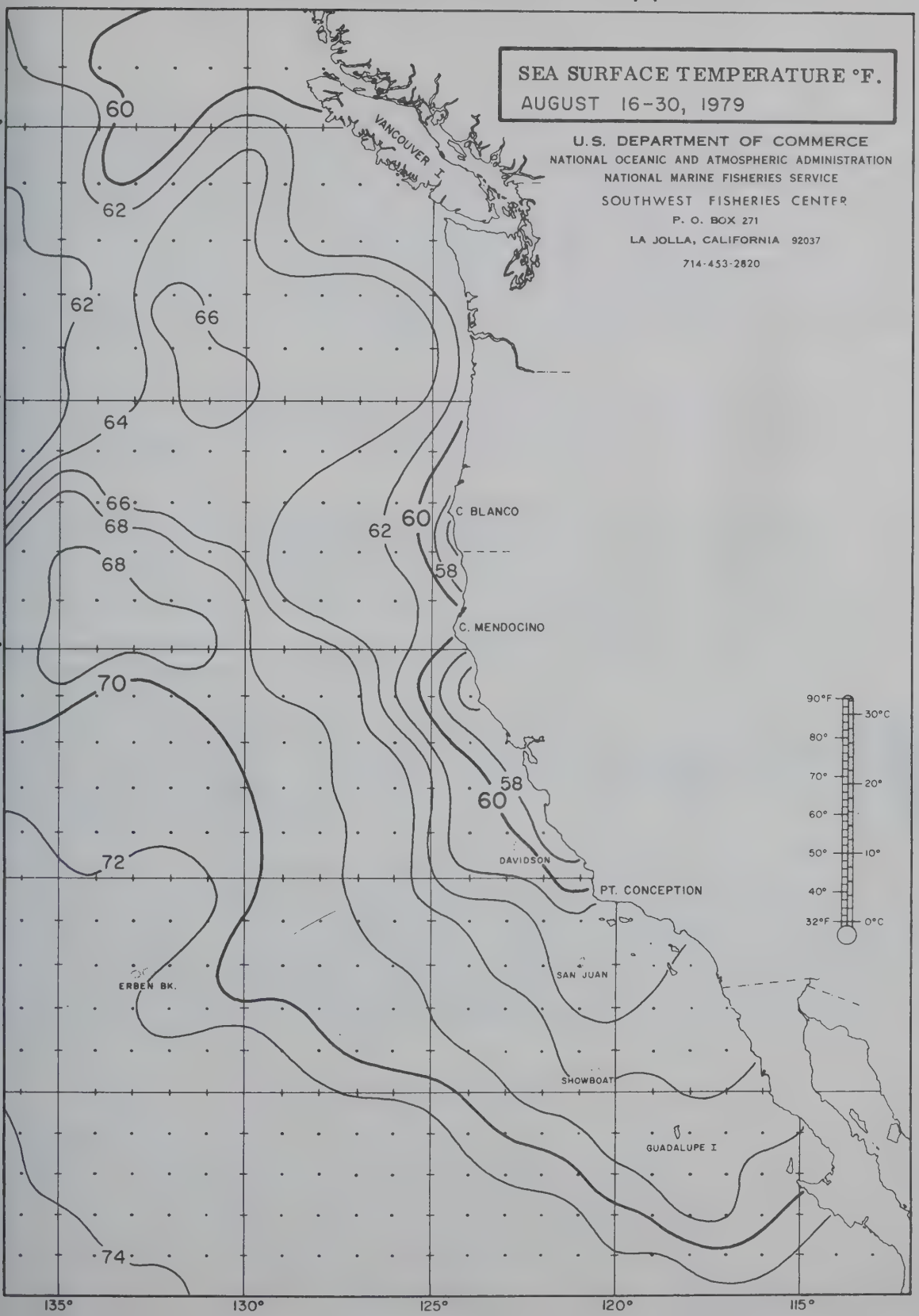


FISHING INFORMATION – supplement



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NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
La Jolla, California 92038

Bulletin No. 79-4

U.S. ALBACORE FISHERY REMAINED SLOW

The U.S. albacore fishery remained slow during the first 2 weeks of August. Most of the fishing activity took e in the areas between Newport, Oregon to Westport, Washington and southwest of the Cortez Bank off San Diego, fornia. The highest scores were reported in the Pacific Northwest where a few 300 fish catches and more were in the first week of August and some 100-150 fish scores were recorded in the second week. Fishing, however, very spotty and fishermen noted that surface waters were warm and "edges" were absent. Boats worked in the oing grounds" areas off the Columbia River during early August, but by August 10 vessels began moving southward he Newport vicinity. Albacore landed from the Pacific Northwest were predominantly 12-15 pounds (5.5-6.8 kg), smaller fish of 7-9 pounds (3.2-4.1 kg) were being caught off Newport. Larger albacore averaging 20-25 pounds -11.4 kg) were caught in the area 50-150 miles southwest of the Cortez Bank. Average scores ranged from 5-60 /boat/day, but catches of 100 fish or more were rare and in the same area fluctuated from fair on one day to ually nothing on the next day. Fishermen also mentioned that catches were made in a straight line and that s recrossing the area where albacore were caught earlier would come up dry. Catches decreased during the second of August and boats began to look for better fishing areas. These boats were fishing in 63-65°F (17.8-19.2°C) surface temperature waters.

Fishing efforts and catches in all other areas along the Pacific west coast were minimal as fuel costs and good on fishing in some areas have been partially responsible for these decreases. Some albacore were caught in the Juan Seamount area, 12 fish were reported caught southwest of the Jackson Seamount on August 7, and small nes were made southwest of Estevan Point, Vancouver Island by a Canadian survey boat in the second week of August. e seiners also netted about 20 tons of albacore north of Guadalupe Island, but jigboats that went to this area unable to catch albacore.

The American Fishermen's Research Foundation's (AFRF) chartered boat, Seawind, worked from the Columbia River to the north end of the Queen Charlotte Islands during August 1-15. Catches ranged from 0-70 fish a day with est scores of 40-70 fish made from 160 miles off the Columbia River to the Cobb Seamount. The fish averaged 4 pounds (5.9-6.4 kg) and were caught from waters with surface temperatures of 60-63°F (15.6-17.2°C). Catches h of the Cobb Seamount were low and no albacore were caught north of approximately 52°30'N latitude. The second chartered vessel, Linda, worked southwest of the Cortez Bank with the research vessel, David Starr Jordan, on core sonic tracking studies and also tagged albacore. As of August 15, the Linda had tagged 65 fish.

The Western Fishboat Owners Association announced on August 2 that four west coast canneries had signed a con- t with this organization to pay fishermen $1320/ton for albacore delivered to the cannery. A maximum of $75/ton also be deducted from the above price at buying stations. By August 10, six canners had signed this contract.

During the first 3 to 4 days in August, fishing weather was very rough from Vancouver to Point Conception and 250 miles from the coast because of a very intense high pressure system centered north of 40°N along 140°W. The ng northerly coastal winds and rough seas decreased by August 6 as the high pressure system weakened and moved hward into the eastern part of the Gulf of Alaska. Fishing weather improved along the coasts of Washington and on during the second week, but the weather remained rough from Cape Mendocino to Monterey Bay until about August South of Point Conception, weather was fair to good during the first half of August within 100 miles of the t. Offshore more than 150 miles, seas were frequently rough.

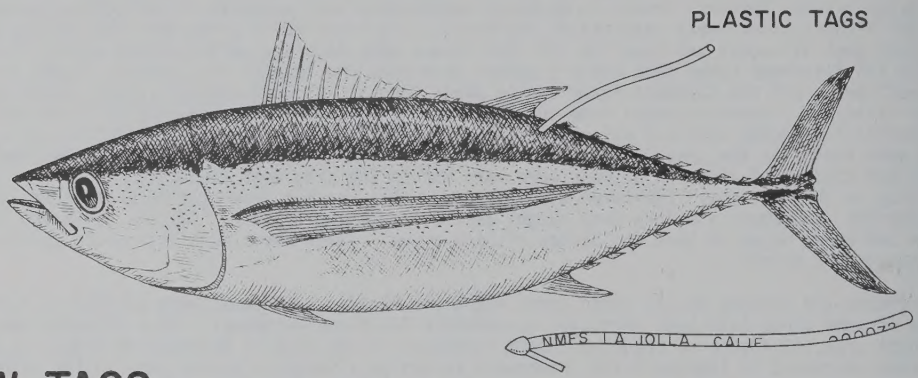
Sea surface temperatures (SST) continued to warm up at above normal rates north of 35°N and west of 125°W. Along of the U.S. west coast, SST's were below normal where strong northerly winds north of 40°N intensified ocean ng and upwelling during the first week of August. During the first half of the month south of Cape Mendocino, s were 2°F (1.1°C) below normal along the coast from Cape Blanco to Cape Mendocino. Offshore more than 60 miles, h of 40°N, SST's were also 2°F below normal where surface winds were strong most of the time. Strong ocean front rge east-west temperature gradients) developed during the month off the coast of Washington from 44°N to 47°N and 100 to 200 miles off the California coast between 33°N and 40°N. Off the coast of southern California, SST's inued to be 1° to 2°F (0.6 to 1.1°C) above normal out to Erben Bank. The coldest SST's were found along the t south of Cape Blanco where coastal upwelling was apparently strongest (see chart). However, upwelling along coasts of Washington and northern Oregon intensified in early August and helped to develop stronger ocean frontal daries from 44°N to 47°N.

Staff, Albacore Fisheries Program
R. Michael Laurs, Leader

ust 15, 1979

$ REWARD $

FOR ALBACORE TUNA TAGS



YELLOW TAGS

THE NATIONAL MARINE FISHERIES SERVICE WILL PAY $ 2.00 FOR EACH YELLOW TAG RECOVERED. (NO NEED TO RETURN FISH)

RECORD:

- ▶ WHERE
- ▶ WHEN
- ▶ HOW

} *FISH WAS CAUGHT*

- ▶ LENGTH OF FISH (TIP OF LOWER JAW TO FORK OF TAIL)

FORWARD TO NMFS ADDRESS ON TAG

RED TAGS

THE NATIONAL MARINE FISHERIES SERVICE WILL PAY $ 50.00 FOR EACH RED TAG & FISH RETURNED. (FISH WITH TAG INTACT MUST BE RETURNED

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NOTIFY NMFS P.O. BOX 271, LA JOLLA, CA. TEL. (714) 453-2820

THE AMERICAN FISHERMEN'S RESEARCH FOUNDATION WILL AWARD CASH PRIZES FOR YELLOW & RED TAG NUMBERS DRAWN IN AN ANNUAL LOTTERY.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
La Jolla, California 92038

Bulletin No. 79-5

ALBACORE FISHING SPOTTY AND INCONSISTENT

Scattered catches of albacore were made along much of the Pacific west coast from Vancouver Island to San Diego during the last two weeks of August. Fishing was characterized by small catches off southern California, good fishing for a few days and then poor weather conditions off central California, and inconsistent and spotty fishing between Eureka, California and Newport, Oregon. In addition, U.S. boats were seized off Vancouver Island by Canadian authorities for allegedly fishing within 200 miles of the Canadian coast.

Scores up to 20 fish/day were made by jigboats operating southwest of the Cortez Bank during August 15-19, but boats left this area on August 20 to fish west-southwest of Morro Bay where a large body of albacore was reported. Catches of 1-1.5 tons for jigboats and 4-5 tons for baitboats were reported from off Morro Bay on August 20 and good fishing with catches of 0.5-1 ton/day/jigboat and 1-1.5 tons/day/baitboat continued through August 23. Most of fish caught off Morro Bay were in the 20-25 pound (9.1-11.4 kg) size class. Unfortunately, inclement weather conditions developed on August 24 and boats were forced to return to port. Most of the vessels remained in port until weather conditions improved on August 29-30. Albacore were also located near the Guide Seamount west-northwest of Monterey early in the third week of August. Catches there were similar to those made off Morro Bay and also on 20-25 pound (9.1-11.4 kg) fish. Poor weather conditions also developed in this area and severely hampered fishing operations beginning on August 24 and continuing through the remainder of the month.

Boats from Eureka to Newport reported some good catches, but fishing was inconsistent and spotty apparently because albacore kept on the move. For example, on August 15 catches of 50-100 fish/boat on 7-14 pound (3.2-6.4 kg) fish were made north of the Jackson Seamount off Cape Blanco, Oregon. Fishing dropped off on the next day in this area, but scores of 50-200 fish on 7-14 pound (3.2-6.4 kg) fish were made off Newport for the next two days. Catches then became very spotty off Newport, and on August 21 some scores of up to 130 fish were reported south of Newport off Cape Sebastian in waters within 50 miles of coast. Spotty inconsistent fishing has also been reported from off northern California. Catches as high as 250 fish were made 70 miles west of Crescent City, California for three or four days during the third week in August but these dropped off sharply. Scores of 40-150 fish on 6-8 pound (2.7-3.6 kg) fish were made on August 26-27, 30-35 miles west of Eureka. But, again fishing lasted for only 2 days and boats returned to port on August 28. Fishermen report that temperature fronts or edges are generally lacking off northern California, Oregon and Washington. The lack of temperature fronts and subsequent lack of concentrations of food organisms have no doubt contributed significantly to the rapid movement of fish and spotty catches.

Canadian vessels, reported good albacore scores averaging about 1.5 tons/day/jigboat between the Dellwood Knolls and Estevan Point, Vancouver Island beginning on August 21 and continuing through August 30. Catches of 200 fish or more were made by U.S. boats that fished north of Cape Flattery during part of the third week of August. However, on August 26 8 boats were seized by Canadian authorities off Vancouver Island and fishing activity by the U.S. fleet off Vancouver Island was curtailed. The eight boats were released on August 29, however, 2 additional U.S. boats were seized on the evening of August 29, and 2 more on the morning of August 30.

A few albacore were caught by San Diego sportboats about 30 miles southwest of San Diego during mid-August, but fishing continued to be generally very poor for southern California sportboats.

The American Fishermen's Research Foundation's (AFRF) chartered boat, Seawind, caught 6-150 fish a day while scouting for albacore 250-650 miles offshore between Vancouver Island and the Columbia River during August 16-30. Best catches of 77-150 fish were made from 530-650 miles offshore between Cape Flattery and Willapa Bay, Washington on August 19-23, and 220-300 miles west of Columbia River on August 29. Surface water temperatures in the fishing areas were 61-65° F (16.1-18.3° C) and all catches until August 29 were composed predominantly of 13-14 pound (5.9-6.4 kg) fish. Albacore caught at the end of August were mostly 7-8 pounds (3.2-3.6 kg). The Seawind will complete the AFRF charter in early Septemer. The second AFRF chartered boat, Linda, fished off Morro Bay during the last half of August, however, because of rough seas in the area, the Linda had only a few days in which albacore tagging operations were successful.

During the third week in August fishing weather was poor to good along the U.S. west coast and out to 130° W. Seas were often choppy and sea surface temperatures (SST) were near or above normal over most of the coastal areas. However, the ocean temperature frontal boundaries (temperature edges) remained weak because of the lack of any prolonged periods of coastal upwelling. During this period the eastern Pacific high pressure system was weak and remained off the coast between 130° W and 140° W. After August 22 the high pressure system intensified and drifted slowly eastward behind several weather fronts. Northerly surface winds strengthened and seas became rough frequently south of 40° N from August 24 to 29. At the end of the month fishing weather improved again. Sea surface temperatures (see chart) continued to warm at above normal rates nearly everywhere except around Cape Mendocino and south of San Juan Seamount. West of 125° W and north of 35° N SST's were 2° to 4° F (1.1-2.2° C) above normal for August. SST's greater than 60° F (15.6°) extended north of Vancouver Island. Most of the warming north of 40° N took place before August 24 when weak low pressure systems prevailed along the west coast. SST's increased 6° to 8° F (3.3° to 4.4° C) during the last half of August from 30° N to 47° N between 125° W and 133° W. East of 120° W and south of 35° N SST's decreased 1° to 2° F (0.6°-1.1° C. after August 15.1979.

The National Weather Service Long Range Prediction Group outlook for the first half of September indicates no significant change in the large scale weather patterns over the eastern Pacific and along the west coast of North America. This suggests that there wil continue to be longer periods of good fishing weather than of bad weather. SST's will continue to rise at above seasonal rates and will be 2° to 4° F (1.1° to 2.2° C) above normal over most of the fishing grounds except along the coast south of Monterey and out to San Juan and Showboat seamounts. SST edges or ocean frontal boundaries will probably not be strong except in a few locations south of Cape Mendocino.

The waters north of Cape Flattery hold good promise for high availability of albacore in the coming weeks. It appears that the migration of the "northern" substock of albacore into waters off the Pacific Northwest is now in full swing. This immigration is several weeks late this year because of an apparent delay in the fish departing from the western North Pacific. The 60° F (15.5° C) isotherm, which is usually coincident with the migration of albacore along the ocean fronts of the Transition Zone across the North Pacific, is located along about latitude 45° N from west of the date line to about 140°-142° W and then it turns northeastward and intersects the coast north of Vancouver Island. It is highly likely that albacore are following a route similar to the distribution of the 60° F (15.5° C) isotherm on their migration into Pacific northwest waters. Waters beyond 200 miles of the Canadian coast that warrant searching include Schoope Tablemount, Peters Ridge and Moser, Pathfinder, Morton, Campbell and Scott Seamounts.

Unless temperature frontal structure become better developed, it is expected that albacore catches will continue to be spotty and inconsistent off Oregon and Washington. Off California the Monterey Seavalley and adjacent areas appear to hold promise.

August 31, 1979

Staff, Albacore Fisheries Progr
R. Michael Laurs, Leader

$ REWARD $

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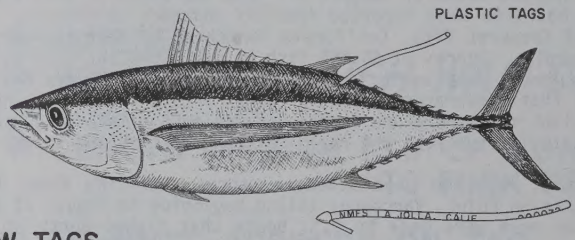

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